



## DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

Certified Mail No.

Agency Interest No. 67572

Activity No. PER20060003

Mr. John O. Ferguson  
Plant Manager  
Burnside Plant  
E.I. du Pont de Nemours & Co., Inc.  
3460 Highway 44  
Darrow, LA 70725

RE: Prevention of Significant Deterioration (PSD) Permit, PSD-LA-722, Dual Absorption Project,  
Burnside Plant, E.I. du Pont de Nemours & Co., Inc., Darrow, Ascension Parish, Louisiana

Dear Mr. Ferguson:

Enclosed is your permit, PSD-LA-722. Construction of the proposed project is not allowed until such time as the corresponding Part 70 Operating Permit is issued.

Should you have any questions, contact Cathy Lu of the Air Permits Division at (225) 219-3124.

Sincerely,

Chuck Carr Brown, Ph.D.  
Assistant Secretary

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Date

CCB:CXL

c: US EPA Region VI

**ENVIRONMENTAL SERVICES**

: PO BOX 4313, BATON ROUGE, LA 70821-4313

P:225-219-3181 F:225-219-3309

WWW.DEQ.LOUISIANA.GOV

**PUBLIC NOTICE**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)**  
**E.I. DU PONT DE NEMOURS & CO., INC. / BURNSIDE PLANT**  
**PROPOSED PART 70 AIR OPERATING PERMIT MODIFICATION& PSD PERMIT**

The LDEQ, Office of Environmental Services, is accepting written comments on Part 70 Air Operating Permit Modification and PSD Permit for E.I. du Pont de Nemours & Co., Inc.(DuPont), 3400 Highway 44, Darrow, Louisiana 70725 for the Burnside Plant. **The facility is located at 400 Highway 44, Darrow, Ascension Parish.**

E.I. du Pont de Nemours & Co., Inc.(DuPont) , Burnside is a sulfuric acid plant which operates under Permit No. 0180-00007-V3 issued on September 4, 2003.

DuPont requested to install dual absorption technology at the existing sulfuric acid plant to reduce sulfur dioxide emissions. Conversion efficiency of 99.8% will be achieved and sulfur dioxide emissions will be reduced to <3.0 lbs per tons of sulfuric acid produced. As part of the project, DuPont will increase the capacity of the sulfur burning contact side by re-rating existing process equipment and sizing new and replaced equipment for dual absorption to the re-rated capacity. The design sulfuric acid capacity will increase from 1800 tons acid/day to 2300 tons acid/day. Permitted emission of SO<sub>2</sub> is decreased by 90% even with the capacity increase.

**This permit was processed as an expedited permit in accordance with LAC 33:I.Chapter 18.**

Estimated emissions in tons per year are as follows:

Pollutant	Permitted	Proposed	Change
PM <sub>10</sub>	0.25	0.38*	+ 0.13
SO <sub>2</sub>	10,402.09	1,007.51	-9394.58
NO <sub>x</sub>	66.53	77.19	+ 10.66
CO	80.62	144.59	+ 63.97
VOC	3.47	3.56	+ 0.09
H <sub>2</sub> SO <sub>4</sub> Mist	47.38	63.96	+16.58

\*not include the H<sub>2</sub>SO<sub>4</sub> Mist

The dual absorption project will reduce SO<sub>2</sub> emission by 9394.58 TPY. As a result of the capacity increase, potential sulfuric acid mist emissions will increase above the significance level for PSD. Proposed particulate matter of ten microns and smaller (PM<sub>10</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compound (VOC) emissions will not increase above PSD significance levels.

The project is significant for increases in H<sub>2</sub>SO<sub>4</sub> mist and requires Prevention of Significant Deterioration (PSD) review. Emissions of a pollutant regulated under PSD shall be controlled by implementing Best Available Control Technology (BACT).

Emissions of sulfuric acid mist will be controlled through Brownian Diffusion mist elimination candles in both the interpass absorber tower and the final absorber tower. The dual absorption technology with Brownian diffusion mist elimination is determined as BACT.

A technical review of the working draft of the proposed permit was submitted to the facility representative and the LDEQ Surveillance Division. Any remarks received during the technical review will be addressed in the "Worksheet for Technical Review of Working Draft of Proposed Permit". All remarks received by LDEQ are included in the record that is available for public review.

Written comments, written requests for a public hearing or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests must be received by 12:30 p.m., Wednesday, June 13, 2007.** Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The proposed permits, permit application, and statement of basis are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5<sup>th</sup> Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at [www.deq.louisiana.gov](http://www.deq.louisiana.gov).**

Additional copies may be reviewed at the Ascension Parish Library - Headquarters located at 500 Mississippi Street, Donaldsonville LA 70346.

Inquiries or requests for additional information regarding this permit action should be directed to Ms. Cathy Lu, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3124.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at [deqmaillistrequest@la.gov](mailto:deqmaillistrequest@la.gov) or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

**Permit public notices including electronic access to the proposed permit and statement of basis** can be viewed at the LDEQ permits public notice webpage at [www.deq.louisiana.gov/apps/pubNotice/default.asp](http://www.deq.louisiana.gov/apps/pubNotice/default.asp) and general information related to the public participation in permitting activities can be viewed at [www.deq.louisiana.gov/portal/tabid/2198/Default.aspx](http://www.deq.louisiana.gov/portal/tabid/2198/Default.aspx).

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at [http://www.doa.louisiana.gov/oes/listservpage/ldeq\\_pn\\_listserv.htm](http://www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm).

**All correspondence should specify AI Number 67572,**

Permit Type	Permit Number	Activity Tracking Number
Part 70 Permit	0180-00007-V4	PER20060002
PSD Permit	PSD-LA-722	PER20060003

Scheduled Publication Date: Wednesday, May 9, 2007 in THE ADVOCATE and Friday, May 11, 2007 in THE GONZALES WEEKLY CITIZEN

form\_7118\_r01  
04/30/07

PSD-LA-722

**AUTHORIZATION TO CONSTRUCT AND OPERATE A MODIFIED FACILITY  
PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION  
REGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE,  
LAC 33:III.509**

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

Burnside Plant  
E.I. du Pont de Nemours & Co., Inc.  
3460 Highway 44  
Darrow, LA 70725

is authorized to construct the Dual Absorption Project at the Burnside Plant, E.I. du Pont de Nemours & Co., Inc., near

3460 Hwy 44  
Darrow, LA 70725

subject to the emissions limitations, monitoring requirements, and other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight on \_\_\_\_\_, 2009, unless physical on site construction has begun by such date, or binding agreements or contractual obligations to undertake a program of construction of the source are entered into by such date.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2007.

Chuck Carr Brown, Ph.D.  
Assistant Secretary  
Office of Environmental Services  
Louisiana Department of Environmental Quality

## **BRIEFING SHEET**

**Burnside Plant**  
**E. I. du Pont de Nemours & Co., Inc.**  
**Agency Interest No.: 67572**  
**Darrow, Ascension Parish, Louisiana**  
**PSD-LA-722**

### **PURPOSE**

E.I. du Pont de Nemours & Company, Inc. (DuPont) will install dual absorption technology at the existing sulfuric acid plant. As part of the project, DuPont will increase the design sulfuric acid capacity from 1800 tons acid/day to 2300 tons acid/day.

### **RECOMMENDATION**

Approval of the proposed construction and issuance of a permit.

### **REVIEWING AGENCY**

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

### **PROJECT DESCRIPTION**

DuPont will install dual absorption technology at the existing sulfuric acid plant. As part of the project, DuPont will increase the capacity of the sulfur burning contact side by re-rating existing process equipment and sizing new and replaced equipment for dual absorption to the re-rated capacity.

#### **New equipment includes:**

- Final absorbing tower, pump tank, and cooler;
- Hot and cold interpass heat exchangers, economizer, and superheater.

#### **Modified or replaced equipment includes:**

- Converter, sulfur furnace/burner, and main blower/turbine;
- Absorber tower/demister tower, pump tank, and cooler;
- Railcar loading spots and river water pumps;
- Existing package boiler is being deleted and replaced with a new boiler equipped with ultra low NO<sub>x</sub> burners.

The design sulfuric acid capacity will increase from 1800 tons acid/day to 2300 tons acid/day.

Associated changes will be made to piping, ducts, electrical distribution systems, instrumentation, and other miscellaneous equipments.

## BRIEFING SHEET

**Burnside Plant**  
**E. I. du Pont de Nemours & Co., Inc.**  
**Agency Interest No.: 67572**  
**Darrow, Ascension Parish, Louisiana**  
**PSD-LA-722**

Estimated emissions, in tons per year, are as follows:

<u>Pollutant</u>	<u>Baseline Actual Emissions</u>	<u>Projected Actual Emissions/PTE</u>	<u>Contemporaneous Changes</u>	<u>Net Emissions Changes</u>	<u>PSD de minimis</u>	<u>Review required?</u>
PM <sub>10</sub>	0.07	0.38	+0.31	-	15	No
SO <sub>2</sub>	10294.48	1007.51	-9286.97	-	40	No
NO <sub>x</sub>	53.93	77.19	+23.26	-	40	No
CO	51.17	144.59	+93.42	-	100	No
VOC	1.51	3.56	+2.05	-	40	No
H <sub>2</sub> SO <sub>4</sub>	46.72	63.96	+17.24	-	7	Yes

The project is significant for increases in H<sub>2</sub>SO<sub>4</sub> mist and requires Prevention of Significant Deterioration (PSD) review. Emissions of a pollutant regulated under PSD shall be controlled by implementing Best Available Control Technology (BACT).

### TYPE OF REVIEW

Sulfuric Acid Mist (H<sub>2</sub>SO<sub>4</sub>) from the proposed project will be above PSD significance level. Therefore, the requested permit was reviewed in accordance with PSD regulations for H<sub>2</sub>SO<sub>4</sub> mist. Emissions of LAC 33:III.Chapter 51-regulated toxic air pollutants (TAP) have been reviewed pursuant to the requirements of the Louisiana Air Quality Regulations.

### BEST AVAILABLE CONTROL TECHNOLOGY

Sulfuric Acid Mist (H<sub>2</sub>SO<sub>4</sub>) will be above PSD significance level and must undergo PSD analyses. The selection of control technology was based on the BACT analysis using a "top down" approach and included the consideration of control of toxic materials.

Unit	BACT	Emission Limits
Emission Point No. 1	Brownian Diffusion Candles	0.15 lb H <sub>2</sub> SO <sub>4</sub> Mist/ ton of 100% sulfuric acid produced
Sulfuric Acid Plant	Dual Absorption Technology	2.4 lb SO <sub>2</sub> / ton of 100% sulfuric acid produced

### AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants to be emitted in significant amounts from a proposed project. H<sub>2</sub>SO<sub>4</sub> mist is the

## **BRIEFING SHEET**

**Burnside Plant  
E. I. du Pont de Nemours & Co., Inc.  
Agency Interest No.: 67572  
Darrow, Ascension Parish, Louisiana  
PSD-LA-722**

pollutant of concern in this case.

Pre-construction monitoring, refined NAAQS modeling, and increment consumption analyses were not required since there is no such standard for H<sub>2</sub>SO<sub>4</sub> mist.

The increase in sulfuric acid mist (a Class III Louisiana Toxic Air Pollutant) has been modeled and will not cause an exceedance of the ambient air standard.

### **ADDITIONAL IMPACTS**

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected. The project will not result in any significant secondary growth effects.

### **PROCESSING TIME**

Application Dated:	December 14, 2006
Application Received:	December 15, 2006
Effective Completeness Date:	April 13, 2007

### **PUBLIC NOTICE**

A notice requesting public comment on the proposed project was published in *The Advocate*, Baton Rouge, Louisiana, on April XX, 2007; and in <<Local Paper>>, <<City>>, Louisiana, on April XX, 2007. Copies of the public notice were also mailed to individuals who have requested to be placed on the mailing list maintained by the Office of Environmental Services on April XX, 2007. A proposed permit was also submitted to U.S. EPA Region VI on April XX, 2007. All comments will be considered prior to a final permit decision.

## **PRELIMINARY DETERMINATION SUMMARY**

**Burnside Plant**  
**E. I. du Pont de Nemours & Co., Inc.**  
**Agency Interest No.: 67572**  
**Darrow, Ascension Parish, Louisiana**  
**PSD-LA-722**  
**April 13, 2007**

### **I. APPLICANT**

Burnside Plant  
E.I. du Pont de Nemours & Co., Inc.  
3460 Highway 44  
Darrow, LA 70725

### **II. LOCATION**

E.I. du Pont de Nemours & Co., Inc. - Burnside Plant is located at 3460 Hwy 44, Darrow, Louisiana. Approximate UTM coordinates are 701.2 kilometers East, 3334.3 kilometers North, zone 15.

### **III. PROJECT DESCRIPTION**

DuPont will install dual absorption technology at the existing sulfuric acid plant. As part of the project, DuPont will increase the capacity of the sulfur burning contact side by re-rating existing process equipment and sizing new and replaced equipment for dual absorption to the re-rated capacity.

#### **New equipment includes:**

- Final absorbing tower, pump tank, and cooler;
- Hot and cold interpass heat exchangers, economizer, and superheater.

#### **Modified or replaced equipment includes:**

- Converter, sulfur furnace/burner, and main blower/turbine;
- Absorber tower/demister tower, pump tank, and cooler;
- Railcar loading spots and river water pumps;
- Existing package boiler is being deleted and replaced with a new boiler equipped with ultra low NO<sub>x</sub> burners.

The design sulfuric acid capacity will increase from 1800 tons acid/day to 2300 tons acid/day.

Associated changes will be made to piping, ducts, electrical distribution systems, instrumentation, and other miscellaneous equipments.

## PRELIMINARY DETERMINATION SUMMARY

**Burnside Plant**  
**E. I. du Pont de Nemours & Co., Inc.**  
**Agency Interest No.: 67572**  
**Darrow, Ascension Parish, Louisiana**  
**PSD-LA-722**  
**April 13, 2007**

Estimated emissions, in tons per year, are as follows:

<u>Pollutant</u>	<u>Baseline Actual Emissions</u>	<u>Projected Actual Emissions/PTE</u>	<u>Contemporaneous Changes</u>	<u>Net Changes</u>	<u>PSD de minimis</u>	<u>Review required?</u>
PM <sub>10</sub>	0.07	0.38	-	+0.31	15	No
SO <sub>2</sub>	10294.48	1007.51	-	-9286.97	40	No
NO <sub>x</sub>	53.93	77.19	-	+23.26	40	No
CO	51.17	144.59	-	+93.42	100	No
VOC	1.51	3.56	-	+2.05	40	No
H <sub>2</sub> SO <sub>4</sub>	46.72	63.96	-	+17.24	7	Yes

The project is significant for increases in H<sub>2</sub>SO<sub>4</sub> mist and requires Prevention of Significant Deterioration (PSD) review. Emissions of a pollutant regulated under PSD shall be controlled by implementing Best Available Control Technology (BACT).

#### IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for new major or modified major stationary sources requires review under Prevention of Significant Deterioration regulations, 40 CFR 52.21. PSD review entails the following analyses:

- A. A determination of the Best Available Control Technology (BACT);
- B. An analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;
- C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);
- D. An analysis of the PSD increment consumption;
- E. An analysis of the source related growth impacts;
- F. An analysis of source related growth impacts on soils, vegetation, and visibility;

## **PRELIMINARY DETERMINATION SUMMARY**

**Burnside Plant  
E. I. du Pont de Nemours & Co., Inc.  
Agency Interest No.: 67572  
Darrow, Ascension Parish, Louisiana  
PSD-LA-722  
April 13, 2007**

- G. A Class I Area impact analysis; and
- H. An analysis of the impact of toxic compound emissions.

### **A. BEST AVAILABLE CONTROL TECHNOLOGY**

Under current PSD regulations, an analysis of “top down” BACT is required for the control of each regulated pollutant emitted from a modified major stationary source in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Part 60.

#### **BACT analyses for H<sub>2</sub>SO<sub>4</sub> Mist**

##### **Emission Point No. 1 – Sulfuric Acid Plant**

In sulfuric acid plants, acid mist is removed from the gas stream exiting the acid towers primarily using either mesh pads or candles (vertical tubes). Candle filter media primarily consist of fibers, filaments, or wires. Mist eliminator performance is multi-faceted, comprised of mist collection, particle regeneration (re-entrainment), pressure drop, service life, and maintenance. The goal is to maximize filtration area without sacrificing performance.

Mist particle collection mechanisms for sulfuric acid plants are of three types:

- Impaction involves the trapping of a mist particle in a gas stream when it impacts on a fiber. Mesh pads are primarily impaction devices;
- Interception means the particle is intercepted from the gas stream if it cannot squeeze between two targets or if it touches a target as it passes by.

Impaction and interception are the primary collection methods for removing large mist

## PRELIMINARY DETERMINATION SUMMARY

**Burnside Plant**  
**E. I. du Pont de Nemours & Co., Inc.**  
**Agency Interest No.: 67572**  
**Darrow, Ascension Parish, Louisiana**  
**PSD-LA-722**  
**April 13, 2007**

particles from a gas stream;

- Brownian Diffusion involves the likelihood that the sub-micron size particles which are in constant random motion (Brownian movement) will contact a target and be captured as the mist particle passes by in the gas stream.

Brownian Diffusion devices also collect particles by interception and impaction, but are selected for their high efficiency in removal of fine submicron particles.

It is important to note that with the impaction mechanism, collection efficiency decreases as the gas and particle velocity decrease because particles have less momentum and can move with the gas stream. With the interception mechanism, collection efficiency is independent of velocity since this action is somewhat similar to mesh filter or sieve. The capture efficiency using the Brownian Diffusion mechanism increase as gas velocity decreases. This is because the small particles when traveling at lower velocities will have more residence time in the fiber media.

Emissions of sulfuric acid mist will be controlled through Brownian Diffusion mist elimination candles in both the interpass absorber tower and the final absorber tower. The Brownian Diffusion candles were selected due to their high efficiency in capturing sub-micron particles and ability to collect large particles in the gas streams of both towers.

Unit	BACT	Emission Limits
Emission Point No. 1	Brownian Diffusion Candles	0.15 lb H <sub>2</sub> SO <sub>4</sub> Mist/ ton of 100% sulfuric acid produced
Sulfuric Acid Plant	Dual Absorption Technology	2.4 lb SO <sub>2</sub> / ton of 100% sulfuric acid produced

### **B. ANALYSIS OF EXISTING AIR QUALITY**

The Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants to be emitted in significant amounts from a proposed modification or new facility. H<sub>2</sub>SO<sub>4</sub> mist is the pollutant of concern in this case.

Pre-construction monitoring, refined NAAQS modeling, and increment consumption analyses were not required since there is no such standard for H<sub>2</sub>SO<sub>4</sub> mist.

## **PRELIMINARY DETERMINATION SUMMARY**

**Burnside Plant  
E. I. du Pont de Nemours & Co., Inc.  
Agency Interest No.: 67572  
Darrow, Ascension Parish, Louisiana  
PSD-LA-722  
April 13, 2007**

### **C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS**

The increase in sulfuric acid mist (a Class III Louisiana Toxic Air Pollutant) has been modeled and will not cause an exceedance of the ambient air standard.

### **D. PSD INCREMENT ANALYSIS**

PSD increment modeling was not conducted since there is no PSD increment for H<sub>2</sub>SO<sub>4</sub> mist.

A summary of the air quality analyses is also presented in Table I.

### **E. SOURCE RELATED GROWTH IMPACTS**

Operation of this facility is not expected to have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing will be associated with the project. As a result, there will not be any significant increases in pollutant emissions indirectly associated with the proposed project. Secondary growth effects will include hundreds of skilled and unskilled laborers during the anticipated 21 months of construction.

### **F. SOILS, VEGETATION, AND VISIBILITY IMPACTS**

There will be no significant impact on area soils, vegetation, or visibility.

### **G. CLASS I AREA IMPACTS**

Louisiana's Breton Wildlife Refuge and Arkansas' Caney Creek Wilderness Area, the nearest Class I areas, are over 100 kilometers from the site, precluding any significant impact.

### **H. TOXIC EMISSIONS IMPACT**

The proposed project will produce H<sub>2</sub>SO<sub>4</sub> mist. The increase in sulfuric acid mist (a Class III Louisiana Toxic Air Pollutant) has been modeled and will not cause an exceedance of the ambient air standard.

The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

## **PRELIMINARY DETERMINATION SUMMARY**

**Burnside Plant  
E. I. du Pont de Nemours & Co., Inc.  
Agency Interest No.: 67572  
Darrow, Ascension Parish, Louisiana  
PSD-LA-722  
April 13, 2007**

### **V. CONCLUSION**

The Air Permits Division has made a preliminary determination to approve the construction of the Dual Absorption Project at the E.I. du Pont de Nemours & Co., Inc. - Burnside Plant near Darrow, in Ascension Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

## **SPECIFIC CONDITIONS**

**Burnside Plant  
E.I. du Pont de Nemours & Co., Inc.  
Agency Interest No.: 67572  
Darrow, Ascension Parish, Louisiana  
PSD-LA-722**

The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary" dated April 13, 2007, and subject to the following emissions limitations and other specified conditions. Specifications submitted are contained in the application and Emission Inventory Questionnaire dated December 14, 2006.

ID No.	Description	Max. Operating Rate	Unit	SO <sub>2</sub>	H <sub>2</sub> SO <sub>4</sub>
1	Sulfuric Acid Plant	2600 tons acid/day	lb/ton of 100% sulfuric acid produced Max. lb/hr TPY	2.4 1625 1007.4	0.15 16.3 63

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated December 14, 2006.
- IV. This permit shall become invalid, for the sources not constructed, if:
- A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
- B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.
- The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.
- This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.
- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.

- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Enforcement Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Enforcement Division with a written report as specified below.
- A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
- B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
- C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:

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1. Report by June 30 to cover January through March
2. Report by September 30 to cover April through June
3. Report by December 31 to cover July through September
4. Report by March 31 to cover October through December

D. Each report submitted in accordance with this condition shall contain the following information:

1. Description of noncomplying emission(s);
2. Cause of noncompliance;
3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.

E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
- B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
- C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
- D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of

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such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.

- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.
- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
1. Generally be less than 5 TPY
  2. Be less than the minimum emission rate (MER)
  3. Be scheduled daily, weekly, monthly, etc., or
  4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division  
La. Dept. of Environmental Quality  
Post Office Box 4302  
Baton Rouge, Louisiana 70821-4302

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- XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

**TABLE I: AIR QUALITY ANALYSIS SUMMARY**

**Burnside Plant**  
**E.I. du Pont de Nemours & Co., Inc.**  
**Agency Interest No.: 67572**  
**Darrow, Ascension Parish, Louisiana**  
**PSD-LA-722**

Pollutant	Averaging Period	Preliminary Screening Concentration ( $\mu\text{g}/\text{m}^3$ )	Level of Significant Impact ( $\mu\text{g}/\text{m}^3$ )	Significant Monitoring Concentration ( $\mu\text{g}/\text{m}^3$ )	At the Monitoring Station Monitored Values ( $\mu\text{g}/\text{m}^3$ )	Monitoring Station Modeling results ( $\mu\text{g}/\text{m}^3$ )	Background ( $\mu\text{g}/\text{m}^3$ )	Maximum Modeled Concentration ( $\mu\text{g}/\text{m}^3$ )	Modeled + Background Concentration ( $\mu\text{g}/\text{m}^3$ )	AAS ( $\mu\text{g}/\text{m}^3$ )	Modeled PSD Increment Consumption ( $\mu\text{g}/\text{m}^3$ )	Allowable Class II PSD Increment ( $\mu\text{g}/\text{m}^3$ )
H <sub>2</sub> SO <sub>4</sub> Mist	8-hour	-	-	-	-	-	NA	7.29	-	23.80	-	-
NR = Not required.												

## Worksheet for Technical Review of Working Draft of Proposed Permit

<b>Company Name:</b>	<b>DuPont</b>	<b>AI #:</b>	<b>67572</b>	<b>TEMPO Activity No:</b>	<b>PER20060002 PER20060003(PSD)</b>
<b>Facility Name:</b>	<b>Burnside Plant</b>	<b>Remarks Submitted by:</b>	<b>Kerry Long</b>		
<b>Permit Writer:</b>	<b>Cathy Lu</b>	<b>Permit Writer Email address:</b>	<b>cathy.lu@la.gov</b>		

### Instructions

**Permit Reference** – Indicate specific portion(s) of the permit to which the remark relates (i.e. “Specific Condition 120”, or “Section II Air Permits Briefing Sheet”, etc.).

**Remarks** – Explain the basis for each remark. Provide regulatory citations where possible. If the remark is made due to an error or omission in the permit application this must be noted and the revised information ***must be submitted***. Revised information may be submitted separately from this worksheet. Please be aware that revised information must be submitted in writing and certified by the Responsible Official, and if necessary, by a Professional Engineer licensed in Louisiana. *Please Note:* New or additional equipment, processes or operating conditions not addressed in the original permit application will be addressed on a case-by-case basis. The Department reserves the right to address such changes in a separate permit action.

**DEQ Response** – ***DO NOT COMPLETE THIS SECTION.*** This section will be completed by Air Permits Division of DEQ, included in the proposed permit package and made available for public review during any required public comment period.

- Additional rows may be added as necessary.

- Completed Form shall be emailed to the Permit writer in MS Word compatible format within the deadline specified in the email notification.

Permit Reference	Remarks	Air Permits Division Response (for official use only)
Section X of Air Briefing Sheet – Table 1	Please indicate a “3” for Chapter 15 and “1” for 2103 applicability for EQT021 10 Vapor Combustion Unit – I believe these were transposed from previous comments.	changed
Specific Requirement 4	Please add the phrase “when the sulfuric acid plant is shut down” after EQT021. – This was overlooked from previous comments.	changed
Specific Requirement 8	Please add the phrase “when the sulfuric acid plant is shut down” after EQT021. – This was overlooked from previous comments.	changed
Specific Requirement 34	Please insert the word “of” between “use” and “dual”. – This was overlooked in previous comments.	changed